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CLAIMS

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1. ~~A continuous wave ranging system, comprising an~~
r.f. generator for generating an r.f. carrier wave, a
modulator for modulating said r.f. carrier wave in
accordance with a pseudo random code, a transmitting
antenna for radiating a modulated signal from said
modulator towards a target, a receiving antenna and
receiver for detecting a signal reflected back from said
target, a correlator for correlating said signal
reflected back from the target with said pseudo random
code which incorporates a selected phase shift
corresponding to a current range gate to be tested,
whereby the range of the target from the system may be
determined, a store containing a plurality of different
pseudo random codes, and selector means arranged to
supply to the modulator and to the correlator a code
from said store whose sidelobe characteristics are
suitable for a next range gate to be tested.

2. A system as claimed in claim 1, wherein a
plurality of codes are selected from the store and used
in a sequence which substantially eliminates the effect
of breakthrough sidelobes.

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3. A system as claimed in claim 2, wherein said plurality of codes are selected on a basis of suitability for use in future envisaged ranges.

4. A system as claimed in claim 3, wherein range is scanned increasingly, codes suitable for the longest ranges being selected.

5. ~~A system as claimed in claim 3, wherein said plurality of codes is selected to reduce the number of code changes required when scanning different ranges.~~

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